*Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ TP:\_\_\_\_\_*

CW#78a: Exponent Rules

Geometry

Due: Tuesday, February 8th

**Congratulations! You scored an A on your special right triangles quiz.** While your classmates review, you will be working to teach yourself similfying exponents. Please be respectful of your classmates and work quietly. Tomorrow you will take an exit ticket that will be graded.

**Directions:**

Each section is a new “rule” for simplifying exponents. When you finish a section you can check your work. If you answered a question incorreclty write an explanation- about the error you made and correct the error in another color.

**Review:**

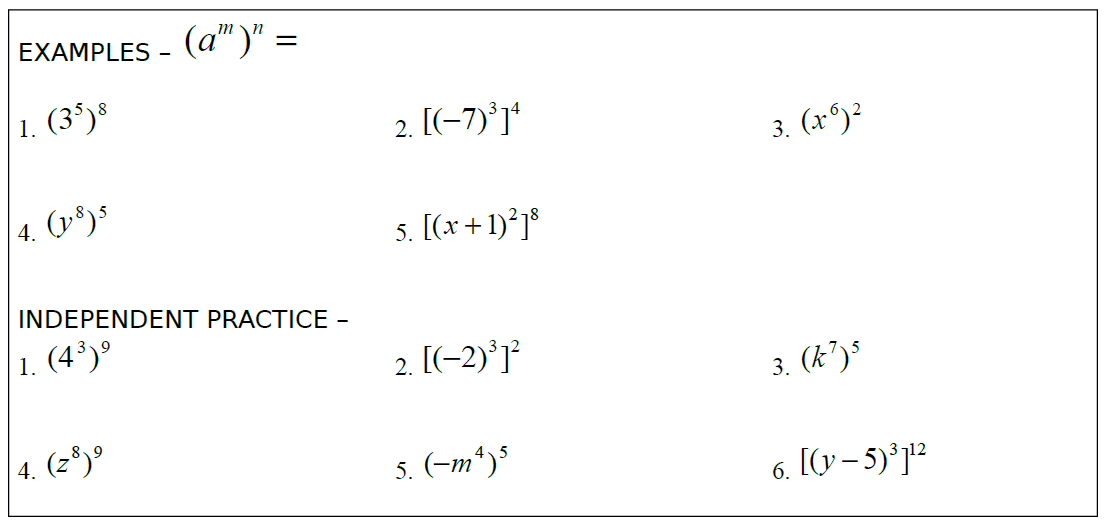
|  |  |
| --- | --- |
| What does  mean?  Then what would  be?  What happens when we put a 5 in front?  5 is called the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  What would we get if *x = 4*? | **Write the following in expanded form:**  Example:  1.  43=4·4·4=64  2.  3.    4.  5. |

**Section 1: (Product rule)**

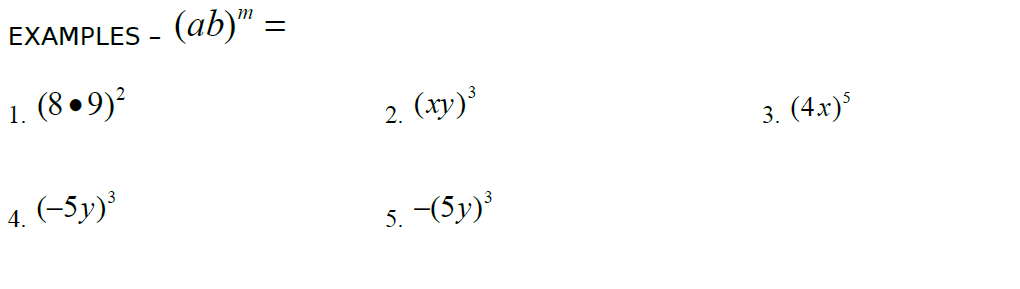
|  |
| --- |
| EXAMPLES:  1.  2.  3.  4.  5.  INDEPENDENT PRACTICE –  1.  2.  3.  4.  5.  6. |

|  |
| --- |
| **Section 1 Practice** Simplify the following expressions: |

**Section 2 :(Power rule)**



**Section 3: (Power rule cont.)**



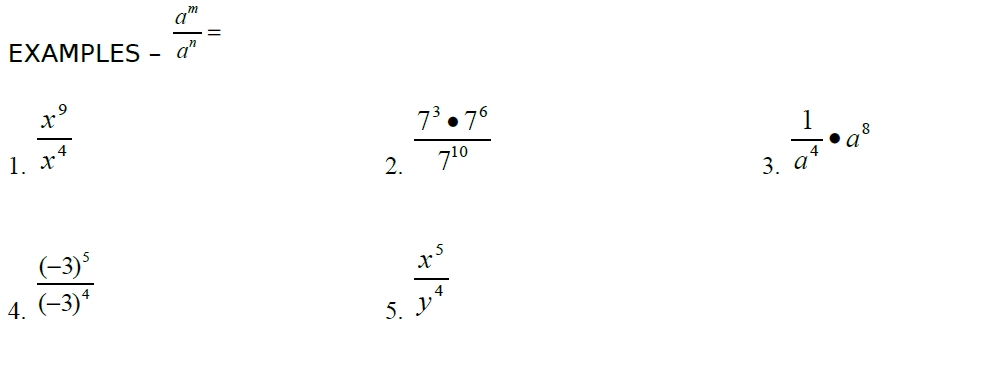
|  |  |  |
| --- | --- | --- |
| **Independent Practice-** | | |
|  |  |  |

**Section 4: (Negative exponents)**

EXAMPLES-

|  |  |  |  |
| --- | --- | --- | --- |
| 1.  5. | 2.    6. | 3.  7. | 4.  8. |

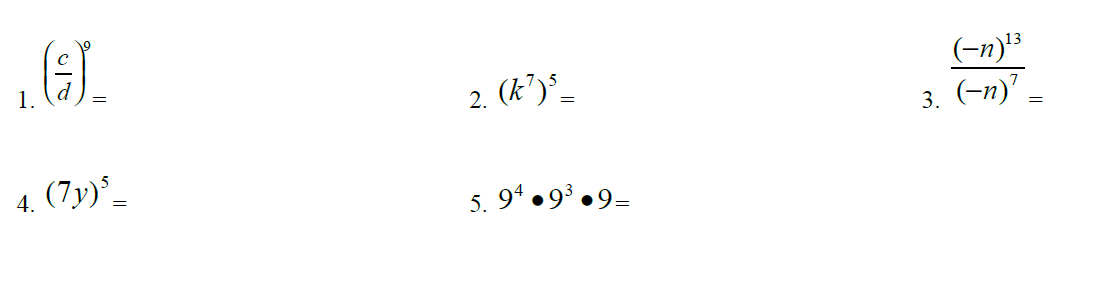
|  |  |  |  |
| --- | --- | --- | --- |
| **Independent Practice:** | | | |
| 1. | 2. | 3. | 4. |

**Section 5: (Quotient rule)**

|  |  |  |
| --- | --- | --- |
| **Independent Practice:** | | |
|  |  |  |
|  |  |  |

**Mixed Review:**

|  |  |  |  |
| --- | --- | --- | --- |
| **RULE** | **ALGEBRA** | **EXAMPLE  w/ NUMBERS** | **EXAMPLE  w/ VARIABLES** |
| **Product Rule** |  | **a.**  \_\_\_\_\_ | **b.** |
| **Quotient Rule** |  | **c.** | **d.** |
| **Power Rule** |  | **e.** | **f.** |
|  |  | **g.** | **h.** |
|  |  | **i.** | **j.** |
| **Zero Exponents** |  | **k.** \_\_\_\_\_ | **l.** \_\_\_\_\_ |
| **Negative Exponents** |  | **m.** | **n.** |
|  |  | **o.** | **p.** |
|  |  | **q.** | **r.** |

**Mixed Practice:**

**Need more practice?**

<https://www.khanacademy.org/math/algebra-basics/core-algebra-exponent-expressions/core-algebra-exponent-properties/v/exponent-properties-involving-products>

^ Also on Wiki

*Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ TP:\_\_\_\_\_*

CW#79a: Exponent Rules Cont.

Geometry

Due: Tuesday, February 8th

**Directions:** Apply the exponent properties to the following complex exponent problems.

|  |  |
| --- | --- |
| 1. Simplify: | 2. Simplify: |
| 3.Simplify: | 4. Simplify: |

|  |  |
| --- | --- |
| 5.Simplify: | 6. Simplify: |
| 7. Simplify: | 8. Simplify: |

|  |  |
| --- | --- |
| 9. Simplify: | 10. Simplify: |
| 11.Simplify: | 12. Simplify: |
| 13.Simplify: | 14. Simplify: |
| 15. Simplify: | 16. Simplify: |